

## REMARKS

This is intended as a full and complete response to the Final Office Action dated February 3, 2009, having a shortened statutory period for response set to expire on May 3, 2009.

Claims 12-13, 18 and 26 have been amended to change their claim dependencies or to more clearly recite various aspects of the invention. Applicants believe no new matter has been introduced by the amendments presented herein. The amendments have been made to put the claims in condition for allowance or in better condition for an appeal. Please reconsider the claims pending in the application for reasons discussed below.

Applicants would like to thank the Examiner for withdrawing (1) the 102(a) rejection over cited in the Notice of Non-Responsive Reply mailed September 23, 2008 and Office Action mailed February 22, 2008 ("previous Office Action"); and (2) the objections to the drawings raised in the previous Office Action.

Claims 12-15, 18-19 and 21-22 are objected for depending upon cancelled claims. Applicants would like to thank the Examiner for pointing these out. Claims 12-13 have been amended to depend from claim 1. Claim 18 has been amended to depend from claim 17. The amendments to change the dependency in claims 12-13 and 18 were inadvertently overlooked when the base claims from which claims 12-13 and 18 depend were cancelled without prejudice. Withdrawal of the objection is respectfully requested.

Claims 26-27 stand rejected under 35 USC 112, first paragraph. In particular, the Examiner takes the position that the specification does not support "hydrophones" in claim 26 and that it only supports "streamers". Accordingly, claim 26 has been amended to replace "hydrophones" with "streamers". Withdrawal of the rejection is respectfully requested.

Claims 1-8, 17, 20, 23-27 and 29-32 stand rejected under 35 USC 103(a) as being unpatentable over Hybrid Seismic Inversion: A Reconnaissance Tool For Deepwater Exploration, 11/2000 by Mallick et al. (Mallick 2000) in view of US Patent No. 6,694,261 ("Huffman"). Applicants respectfully traverse this rejection.

The Examiner takes the position that column 2 and 3 on page 1230 of Mallick 2000 teaches “developing a geologic model of shallow water flow risk areas; performing a stratigraphic analysis on only P-wave seismic data to determine a control location within the P-wave seismic data.” In particular, the Examiner states the following statements as teaching those limitations:

The **elastic earth models (consisting of P-wave velocity, density, and Poisson’s ratio)** obtained at each location of the prospect where **prestack GA inversion** was run can be used as background low-frequency impedance trends for poststack inversion and can create a hybrid inversion scheme.

Nothing in the above statements or in columns 2-3 on page 1230 teaches or discloses performing a stratigraphic analysis on only P-wave seismic data to determine a control location within the P-wave seismic data. In fact, Mallick 2000 mentions nothing about performing any stratigraphic analysis, let alone performing a stratigraphic analysis on only P-wave seismic data.

Further, as the Examiner mentions, Mallick 2000 does not teach or disclose identifying shallow water flow risk areas using the P-wave velocity to the S -wave velocity ratio. However, the Examiner attempts to supplement this missing limitation with Huffman. Nevertheless, like Mallick 2000, Huffman also does not teach or disclose performing a stratigraphic analysis on only P-wave seismic data to determine a control location within the P-wave seismic data. Since neither Mallick 2000 nor Huffman, alone or in combination, teaches or discloses “performing a stratigraphic analysis on only P-wave seismic data to determine a control location within the P-wave seismic data” or “performing a stratigraphic analysis on the P-wave seismic data,” claims 1, 26 and 29 are patentable over Mallick 2000 and Huffman. Claims 2-8, 12-15, 17-25, 27 and 30-32 are also patentable over Mallick 2000 and Huffman, since they depend from claims 1, 26 and 29, respectively. Withdrawal of the rejection is respectfully requested.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed invention. Having addressed all

issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

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